Lesson 2: The Demand for Money

Monetary Economics | March 11, 2026

Agenda

- Demand for Money
- Irving Fisher's Transaction-Based Theory
- Keynes' Liquidity Preference Theory
- Baumol-Tobin Analysis
- Friedman's Modern Quantity Theory of Money

Demand for Money

Demand for money is the desire of households and businesses to hold assets in a form that can be easily exchanged for goods and services.

Liquidity is the most important characteristic of money that distinguishes it from other types of assets. For this reason, the demand for money is sometimes called the demand for liquidity.

Irving Fisher's Transaction-Based Theory

Quantity Theory of Money (QTM) Equation

$$MV = PY$$

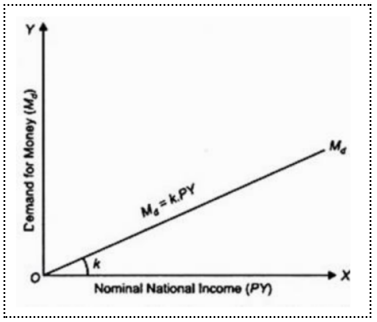
Where:

- M = money supply
- V = velocity of circulation of money
- P = overall price level (transactions for the economy during the period)
- Y = amount of goods and services produced (income level)

Fisher has two assumptions which is (1) velocity as constant in the short run and (2) flexible wages and prices guaranteed output, Y, to be at its full-employment level, so it was also constant in the short run.

If both V and Y are constant, then changes in M must cause changes in P to preserve the equality between MV and PY. This is the quantity theory of money: a change in the money supply, M, results in an equal percentage change in the price level P.

Cambridge Cash Balance Theory



Where:

- $M_d = kPY$
- Y = real national income
- P = average price level of currently produced goods and services
- PY = nominal income
- k = proportion of nominal income (PY) that people want to hold as cash balances

Keynesian Demand for Money - Liquidity Preference Theory

Transactions Motive – people hold money to pay for everyday expenses and regular purchases, like food, fare, bills, and other routine payments.

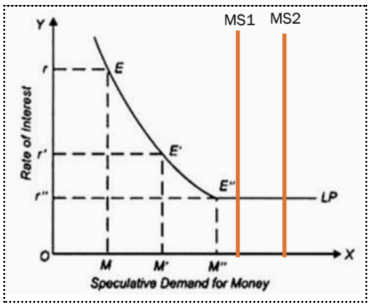
Precautionary Motive – people hold money for emergencies or unexpected needs, such as illness, accidents, or sudden expenses.

Speculative Motive – people hold money to take advantage of future opportunities, especially when they expect changes in bond prices or interest rates; they keep cash now so

they can use it later when it seems more profitable.

Demand Function

$$M_d = f_1(Y) + f_2(r)$$



Baumol-Tobin Analysis

Tobin's Portfolio Approach to Demand for Money:

- Money held for transaction purposes is interest elastic.
- Individuals keep a portfolio of assets which consists of both bonds and money. People prefer more wealth to less.
- Faced with various safe and risky assets, individuals diversify their portfolio by holding a balanced combination of safe and risky assets.
- Individual behavior shows risk aversion.

Baumol's Inventory Approach to Transactions Demand for Money:

- Individuals also hold inventory of money because this facilitates transactions (i.e. purchases) of goods and services.
- An individual holds money (i.e. currency and demand deposits) instead of keeping his wealth in saving deposits which are quite safe and earn some interest because of convenience and capability of using it for transactions of goods.
- As interest rate on saving deposits goes up people will tend to shift a part of their money holdings to the interest-bearing saving deposits. Individuals compare the costs and benefits of funds in the form of money with the interest- bearing saving deposits.
- At a lower interest rate on bonds, savings and fixed deposits, the opportunity cost of holding money will be less which will prompt people to hold more money for transactions. At higher interest rates, bonds, savings and fixed deposits are more attractive relative to money holding for transactions. Therefore, at higher interest rates people tend to hold less money for transaction purposes.

Friedman's Modern Quantity Theory of Money

$$M_d/P = f(W, h, r_m, r_b, r_e, P, \Delta P/P, U)$$

Where:

- M_d/P = demand for real money balances
- W = wealth of the individuals
- h = proportion of human wealth to the total wealth held by the individuals
- r_m = rate of return or interest on money
- r_b = rate of interest on bonds
- r_e = rate of return on equities
- P = price level

- ΔP/P = change in price level (i.e. expected rate of inflation)
- U = institutional factors

Wealth (W) = an individual's demand for money directly depends on his total wealth.

r_m = is the own rate of interest on money. Money kept in the form of currency and demand deposits does not earn any interest while money held as saving deposits and fixed deposits earns certain rates of interest and it is this rate of interest which is designated by rm in the money demand function. The higher the own rate of interest, the greater the demand for money.

r_b and r_e = the demand for money is negatively related to the rate of interest (or return) on bonds, equities and other such non-money assets.

Price Level (P) = As the price level goes up, the demand for money will rise and, on the other hand, if price level falls, the demand for money will decline.

Expected Rate of Inflation (ΔP/P) = when people expect a higher rate of inflation, they will tend to convert their money holdings into goods or other assets which are not affected by inflation. On the other hand, if people expect a fall in the price level, their demand for money holdings will increase.